

REMARKS

In view of the foregoing amendments and following remarks responsive to the Office Action in this application, dated August 5, 2004, Applicant respectfully requests favorable reconsideration of this application.

Applicant respectfully thanks the Office for withdrawing the previous rejections.

Rejections and Amendments As To Form

In section 3 of the Office Action, the Office objected to claim 1 noting that "said set" should be "said first set". Applicant has herein effected such a change and has carried that change through the various other amendments to the claims as needed. Applicant further notes that the same typographical error appeared in claims 17 and 31. Accordingly, Applicant has herein amended claims 17 and 31 similarly.

In section 5 of the Office Action, the Office rejected claim 7 under 35 USC section 112, second paragraph, as indefinite, indicating that the limitation "said second set" in line 2 lacked antecedent basis. The Office indicated that, for purposes of the prior art rejections, the Office will interpret "said second set" to be "a second set".

Applicant respectfully thanks the Office for catching the typographical error in claim 7. However, "said second set" in claim 7 actually should be "said first set". Applicant has amended the claim accordingly. In fact, Applicant has also slightly amended the language of claim 6 in a similar fashion in order to make it easier to read the claims and understand the antecedent basis for various claim terms with less need to refer back to the earlier claims from which they depend.

The Prior Art Rejections and Amendments

The Office has rejected all claims in view of newly cited primary reference Miyao. More particularly, the Office rejected claims 1, 6, 29, and 30 as anticipated by Miyao, claims 2, 7-11, 17, 18, and 31-33 as obvious over Miyao, and claims 3, 4, 12, 13, 15, 16, 19-24, 26-28, and 34-38 as obvious over Miyao in view of Berger and Applicant's admitted prior art.

Applicant respectfully traverses with respect to former claims 4, 6-11, 20, 30-32, 35, 37, and 38.

By virtue of the foregoing amendments, the claims have been significantly rearranged. In essence, the following changes have been made: claim 1 has been rewritten to include the limitations of former claims 3 and 4, which are now canceled. Claim 6 has been rewritten into independent form to include the limitations of claim 1, from which it formerly depended, claim 17 has been rewritten to incorporate the limitations of dependent claim 20 (including the limitations of claims 18 and 19) from which claimed 20 formerly depended (and claims 18, 19, and 20 have been cancelled), independent claim 29 has been rewritten to incorporate the limitations of former dependent claim 30 (which is now canceled), claim 32 has been rewritten into independent form to include the limitations of former claim 29 (from which it previously depended), claim the 35 has been rewritten in independent form to include the limitations of claims 29, 33, and 34, from which it previously depended, and claimed 37 has been rewritten into independent form to include the limitations of claims 29, 33, 34, and 36, from which it previously depended. Other claims have been amended to provide appropriate claim dependency in view of the aforementioned amendments.

In view of the foregoing amendments, the application now contains independent claims 1, 6, 17, 29, 32, 35, and 37. It also should be clear that, if these claims distinguish over the prior art, all other claims also distinguished over the prior art by virtue of at least dependence on an allowable claim.

The Present Claims Patentably Distinguish Over The Prior Art

Independent Claims 1, 17, and 35

Independent claims 1, 17, and 35 distinguish over the prior art of record at least because they each recite that " $\rho(t) = \lambda(t) / \mu(t)$ is used when call rate through said pipeline has been historically increasing and $\rho'(t) = [\lambda(t) - \rho(t)] / \mu(t)$ is used when call rate through said pipeline has been historically decreasing". The Office continues to rely on admissions as to the content of the prior art allegedly made by Applicant on page 20, line 6 through page 22, line 17 of the application.

Applicant had argued against this assertion in response to all previous Office Actions in this case, noting that the only admission contained on pages 20-22 is that the Erlang blocking formula is known (which does not pertain to the subject matter of claims

4, 20, and 35). In response to this argument, the Office asserted in Section 6 of the preceding Office Action that Applicant also discloses that the Erlang formula can be applied with a non-stationary offered load for a non-stationary system. In this section of the specification, Applicant discloses that two non-stationary equations may be used where “equation 2a is usually referred to as a point-wise stationary approximation (PSA), while equation 2b is referred to as a modified offered load (MOL) approximation”. The Office asserted that, by using language such as “usually referred to”, Applicant specifically disclosed that the equations are well known in the art and, as such, the mathematical relationships between the equations would also be known in the art.

Applicant respectfully traverses. First and foremost, the conclusion that the knowledge of two equations inherently leads to the knowledge of a particular relationship between the two equations is categorically incorrect. Secondly and in any event, the relationship between the two equations is not the proper inquiry. It is not necessarily the equations themselves or their relationship to each other that needs to be novel. Rather, it is the decision to use the first equation when call rate has been increasing and to use the second equation when call rate has been decreasing. Quite simply, the Office cannot reject this claim as obvious without presenting evidence that it is known to use the first equation in the first situation and the second equation in the second situation. The Office has not cited any prior art to that effect, including Applicant’s alleged admissions. Accordingly, claims 4, 17 and 35 distinguish over the prior art of record.

Independent Claims 6 and 29

Independent claims 6 and 29 also patentably distinguish over the prior art of record. They recite “(4) for each pipeline in said first set that cannot be resized in accordance with step (3), determining if a path exists that can accommodate a pipeline of said size determined in step (2)” and “(5) for each pipeline in said the first set that cannot be resized and for which a path exists that can accommodate a pipeline of said size determined in step (2), creating a pipeline having said size, and directing all new channels between the corresponding gateway nodes through said newly created pipeline” (the quoted language is from claim 6: claim 30 contains substantively similar language). The Office asserts that Miyao teaches this feature in col. 10, line 39 through col. 11, line 33. Specifically, the Office asserted:

Miyao discloses (4) for each pipeline that cannot be resized in accordance with step (3) (pipeline for which simple expansion is unsuccessful) (col., lines 51-61), determining if a path exists that can accommodate a pipeline of said size determined in step (2) (col. 10, line 39- col. 11, line 33) where the path can be the same path on which the virtual pipeline currently resides; and (5) for each pipeline for which a path exists that can accommodate a pipeline of said size determined in step (2), creating a pipeline having said size, and directing all new channels between the corresponding gateway nodes through said newly created pipeline (col. 10, line 39–col. 1, line 33) where the newly created pipeline is the pipeline which has been resized.

Applicant respectfully traverses. The Office's reading of the language of claims 6 and 30 is not proper. In essence, these claims recite that, when it is determined that a pipeline cannot be resized in accordance with step (3), a new pipeline is created of a size equal to the necessary expansion size as determined in step (2), if possible. The Office is asserting that this claim language reads on Miyao because the language is broad enough to read on resizing the original pipeline (as well as creating an entirely new pipeline, which is what Applicant intended to cover with this language). This broad reading of the claim language at hand is implausible and inherently improper. First and foremost, it is simply improper English to read a statement reciting that a pipeline is "created" as covering changing an existing pipeline (e.g., by resizing it). This is particularly true in the context of the present application where the specification and claims clearly convey to anyone of skill in the related arts that this strained reading of the language is not the Applicant's intended meaning.

Even further and most compellingly, claims 6 and 30 expressly recite that the step of creating a new pipeline occurs when the old pipeline cannot be resized. Hence, it is internally inconsistent with the actual language of the claims to read the step of creating a new pipeline as covering resizing the existing pipeline. The language itself internally precludes such a reading. With specific reference to claim 6, for example, step (5) says "for each pipeline in said first set that cannot be resized and for which a path exists that can accommodate a pipeline of said size determined in step (two), creating a pipeline ...". Thus, the Office's reading of the statement in claim 6 of creating a pipeline when the old pipeline cannot be resized as reading on resizing the old pipeline is internally inconsistent with the claim language that is being interpreted.

Accordingly, claims 6 and 30 do distinguish over the prior art of record because the scenario that the Office relies on is inherently excluded by the claim language itself.

Independent Claim 32

Turning to claim 32, it recites that, for each pipeline in the first set that cannot be resized and for which an alternate path does not exist, determining if a pipeline can be created that can accommodate a fraction of the channels in that pipeline by which said pipeline exceeds the threshold; and, if so, “creating a new pipeline of a size corresponding to said fraction of channels and directing said fraction of new channels from said pipeline to said new pipeline”. The Office conceded that Miyao does not disclose this, but asserted that this is obvious from Miyao. Specifically, the Office asserted that Miyao does not disclose this step, i.e., for each pipeline in said first set that cannot be resized in step (3) and for which an alternate path is determined in step (4) not to exist, determining if a pipeline can be created that can accommodate a fraction of said channels in said pipeline by which said pipeline exceeds said threshold. However, the Office argued that Miyao does disclose, for each pipeline in said first set, determining if a pipeline can be created that can accommodate said channels in said pipeline by which said pipeline exceeds said threshold (Col. 10, line 39 – Col. 11, line 33) and that the differences between the two are obvious.

The Office’s analysis is faulty. There are at least two problems with the Office’s analysis. First, contrary to the Office’s assertion, Miyao does not disclose creating new pipelines under any circumstances. In Miyao, there are two possible actions, namely, if unused and unassigned capacity is available, the system will simply resize the existing pipeline or, if not, the system will reassign unused capacity from other, under-utilized pipelines (that pass through the appropriate nodes) to the over-utilized pipeline. See col. 3, line 52 through col. 5, line 31 and col. 10, line 38 through col. 13, line 45. Miyao does not disclose the concept of creating entirely new pipelines. Therefore, the premise upon which the Office’s conclusion that it would have been obvious to extend Miyao’s alleged teaching of creating new pipelines to the conditions specified in claim 32 obviously falls apart in view of the fact that Miyao actually does not even disclose creating new pipelines under any circumstances. Second, even if Miyao did so teach, the Office has not set forth

a proper obviousness rejection in any event. Specifically, MPEP §2143 lists three requirements for a proper rejection based on obviousness, namely:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The Office merely asserted that the proposed modification of Miyao is obvious because “Miyao also discloses that by increasing the capacity of the pipeline more channels can be accommodated”. This is improper hindsight reconstruction. In essence, the Office is admitting that the reference does not teach the limitation, but then referring to the same reference as providing the motivation for the proposed modification. This is inherently impossible. Additionally, the reference actually teaches away from such a combination by virtue of disclosing only other ways of increasing the capacity of the pipeline. The Office’s logic boils down to the assertion that a disclosure of a desired result (increasing capacity) makes obvious every way of achieving that result. This clearly is not the law.

Independent Claim 37

Turning to independent claim 37, it recites features concerning the resizing or deletion of underutilized pipelines in order to make additional channels available for congested pipelines. Specifically, claim 37 recites the feature of, for each underutilized pipeline that cannot be resized, determining if a path exists for creating a new pipeline of the smallest size that can accommodate the traffic in that underutilized pipeline and, if so, creating such a pipeline and directing all new channels appropriate for that pipeline through that pipeline.

The Office rejected claim 37 over Miyao in view of Berger and Applicant's admitted prior art. With respect to the specific features discussed above, the Office asserted that they are disclosed in Miyao col. 10, line 39 through col. 11, line 33. However, this is not true. As noted above in the discussion of claim 32, contrary to the Office’s assertion, Miyao does not disclose creating new pipelines under any circumstances, let alone under the conditions set forth in claim 37. In Miyao, there are only two possible actions, namely,

resizing the existing pipeline or reassigning unused capacity from other, under-utilized pipelines (that pass through the appropriate nodes) to the over-utilized pipeline. See col. 3, line 52 through col. 5, line 31 and col. 10, line 38 through col. 13, line 45. Miyao does not disclose the concept of creating entirely new pipelines. Therefore, the premise upon which the Office's conclusion that it would have been obvious to extend Miyao's alleged teaching of creating new pipelines to the conditions specified in claim 37 obviously falls apart in view of the fact that Miyao actually does not even disclose creating new pipelines under any circumstances.

Conclusion

In view of the foregoing amendments and remarks, this application is now in condition for allowance. Applicant respectfully requests the Examiner to issue a Notice of Allowance at the earliest possible date. The Examiner is invited to contact Applicant's undersigned counsel by telephone call in order to further the prosecution of this case in any way.

Respectfully submitted,



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